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+9549251101

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Applc. No. 09/758,299
Amdt. dated September 30, 2003
Reply to Office action of July 2, 2003

Amendments to the Claims begin on page 3 of this paper.

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Claim Amendments

Claim 1 (currently-amended): A cutting unit, comprising:

a pair of cylinders disposed opposite one another with a gap formed there-between for receiving a ribbon on a travel path, said pair of cylinders including a first cutting cylinder having a periphery with a cutting knife disposed helically about said periphery and a second cylinder;

C1 one drive rotating said first cutting cylinder for cutting the ribbon and providing a signature cut from the ribbon with a smooth, straight edge;

a subframe having a pivot point, said subframe being pivotable about said pivot point, said subframe supporting said cylinders, and said subframe controlling a position of said cylinders in regard to the ribbon and therefore controlling a cutting length of the ribbon;

a further drive connected to said subframe for pivoting said subframe about said pivot point;

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a control unit connected to and controlling said further drive and said one drive for controlling a rotational speed of said first cutting cylinder; and

a sensor disposed in the travel path of the ribbon and monitoring the cutting operation of the ribbon, said sensor connected to said control unit, and said sensor providing control signals to said control unit for controlling operation of said cylinders.

Claim 2-4 (cancelled)

Claim 5 (previously-presented): The cutting unit according to claim 1, wherein said one drive is a first drive, and including a second drive rotating and mounting said second cylinder, said first drive and said second drive are supported by said subframe.

Claim 6 (cancelled)

Claim 7 (previously-presented): The cutting unit according to claim 1, wherein said one drive is a first drive, a second drive rotates and mounts said second cylinder, and said first drive and said second drive are motors.

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Claim 8 (previously-presented): The cutting unit according to claim 1, wherein said one drive is a first drive, a second drive rotates and mounts said second cylinder, and said first drive and said second drive are gears to be driven by motors.

Claim 9 (original):.. The cutting unit according to claim 6, wherein said sensor is selected from the group consisting of cameras, optical scanners, speed sensors, and position sensors, and said control unit is a microprocessor based control unit.

Claim 10 (currently-amended): A folder, comprising:

a frame;

a subframe pivotably mounted in said frame about a pivot point;

one drive housed in said subframe;

a pair of cylinders supported by said subframe and disposed opposite one another with a gap formed there-between for receiving a ribbon on a travel path, said pair of cylinders including a first cutting cylinder having a periphery with a cutting knife disposed helically about said periphery and a

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second cylinder, said first cutting cylinder driven by said one drive for cleanly cutting the ribbon and providing a signature cut from the ribbon with a smooth, straight edge;

said subframe controlling a position of said cylinders in regard to the ribbon and therefore controlling a cutting length of the ribbon;

a further drive connected to said subframe for pivoting said subframe about said pivot point;

a control unit connected to and controlling said further drive and said one drive for controlling a rotational speed of said first cutting cylinder; and

a sensor disposed in the travel path of the ribbon and monitoring the cutting operation of the ribbon, said sensor connected to said control unit, and said sensor providing control signals to said control unit for controlling operation of said cylinders.

Claim 11 (previously-presented): The folder according to claim 10, wherein said one drive is a first drive and including a second drive rotating and mounting said second cylinder, said first drive and said second drive rotating said

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cylinders such that a component of travel of a point of contact between said cylinders in a direction of travel of the ribbon matches a speed of the ribbon for cutting the ribbon in a straight line.

Claims 12-21 (cancelled)

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Claim 22 (previously-presented): The cutting unit according to claim 1, wherein said sensors provide control signals to said control unit to maintain an acceptable cut of the ribbon by adjustment of the rotational speed of said cylinder drives, or by adjustment of said further drive pivoting said subframe.

Claim 23 (previously-presented):. The cutting unit according to claim 1, wherein said sensors detect an unacceptable cut of the ribbon, and said control unit adjusts the rotational speed of the cylinders by adjusting the drives.

Claim 24 (previously-presented):. The cutting unit according to claim 1, wherein said sensors detect an unacceptable cut of the ribbon, and said control unit adjusts the rotational speed of the cylinders by controlling the position of said cutting cylinders.

Claim 25 (cancelled)